



Hill Air Force Base, Utah
O g d e n A i r L o g i s t i c s C e n t e r

Hill Air Force Base, Utah

Proposed Final Environmental Assessment for Pond Target Array at the South Range of the Utah Test and Training Range

November 2004

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 12 JAN 2005		2. REPORT TYPE		3. DATES COVERED 00-00-2005 to 00-00-2005	
4. TITLE AND SUBTITLE Environmental Assessment for Pond Target at the South Range of the Utah Test and Training Range				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) 388th Range Squadron (RANS/RSO),6066 Cedar Lane,Hill AFB,UT,84056-5803				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 41	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED POND TARGET ARRAY AT THE SOUTH RANGE OF THE UTAH TEST AND TRAINING RANGE

Description of the Proposed Action

The proposed action is to establish a target array pond on the South Range. The approximate location of the proposed array is N 40 21.641 W 113 12.184. The construction will also require installing a 600' dirt/gravel road from a dirt/gravel source to the proposed target.

The proposed target array pond will consist of a 250'x 250' pond, up to 15 feet deep. The pond will be constructed by building four interconnected dirt walls. The material to build the walls will be dirt/gravel transported by truck from the nearest approved gravel pit. Once the four sides of the proposed pond have been put in place the interior area will be lined with a rubber pad to containerize the water and any debris. The pond will then be filled with water acquired by pumping from shallow depressions located throughout the range that fill with water from the shallow brine aquifer located beneath the west desert.

Summary of Environmental Impacts of the Proposed Action

Surface Water

Any surface water in the proposed area is present due to rainfall and winter snow-melt. The seasonal water is shallow and evaporates rapidly in the arid desert climate. During the summer months the ground in the area is usually dry, with mud or shallow water present in spring and winter. No permanent surface water is located in the area, with the nearest permanent surface water located at Blue Lake on Utah Division of Wildlife Resources land approximately 100 miles northwest of the proposed location. No significant impacts on surface water are anticipated as a result of the proposed action.

Groundwater

No impacts to groundwater are expected from the proposed action. Groundwater qualifies as "Class VI – SALINE GROUND WATER" under Rule 317-6-3.7, Utah Administrative Rules (Mr. Bruce Evans, the 75 Air Base Wing AFB Chief of Environmental Law & Real Estate). The groundwater is less than 10 feet deep throughout the extensive salt flats of the Great Salt Lake Desert, around Great Salt Lake, and beneath wet playas, along streams, and near lakes in many of the lowland areas. (Text: Suzanne Hecker, Kimm M. Harty, and Gary E. Christenson, 1988, *Shallow Ground Water and Related Hazards in Utah*) Mr. Marcus Blood, the Hill AFB Natural Resources Manager, has reported a shallow heavily brined aquifer in the proposed area at a depth ranging from 1' to 8'. Most precipitation to the area quickly evaporates.

Soils

Any impacts on soils in the area due to the proposed action would result from construction of a 600' road to the proposed target site, and the placement of dirt/gravel to form the bermed walls of the target array. Because the target will be constructed on top of the soil and the interior of the pond will be lined with rubber to contain the water and any munitions directed toward the target ground disturbance will be minimized.

Vegetation

No significant impacts to vegetation are anticipated in the placement of the target array. The target array will be constructed in an area that is salt flat terrain and virtually free of vegetation. Construction of the target array will be conducted by driving along existing roads to the target that is currently located adjacent to the proposed location. A 600' road will be constructed to join the two areas. That, too, is located on salt flat terrain with virtually no vegetation present. No endangered or threatened species of plants are known to exist in the proposed area.

Wetlands

The proposed action does not affect wetlands. Blue Lake, the closest jurisdictional wetland area, is approximately 100 miles northwest of the proposed action. The proposed action qualifies for a Utah "permit by rule" determination for the test water discharges.

Air Quality

The proposed action would have no significant impact on air quality. Placement of the proposed target array would not produce any significant changes in air emissions at the South Range. The placement of the array is not expected to cause or create any change in the quantity of aircraft currently flying over the area or any sensitive areas.

Wildlife

The proposed action would have no adverse impact on wildlife. No federally listed threatened or endangered species reside at the site.

Cultural Resources

The target array will be placed in a location that has already undergone a cultural resources inventory. No eligible sites have been identified in the vicinity of the current project area. Prior to construction of the target array the Hill AFB Archaeologist will be notified and may wish to monitor any activities. During construction, personnel will cease work and notify the Archeologist if their activities uncover any suspected cultural sites. Close coordination with the Hill AFB Cultural Resource Office will be maintained during the construction and placement of the target array.

Land Use

Placement of the target array pond is consistent with the current Department of Defense military testing and training operations of the UTTR. The new target array would provide valuable data to further the mission of the Department of Defense and increase the capabilities at the South Range and would not adversely impact land use.

Noise

No increased activities are anticipated as a result of the placement of the proposed target array; therefore, no noise impact is anticipated.

Health and Safety

Because the proposed target array is designated with a rubber liner inside the pond to contain water and/or ordnance no new long-term health and safety hazards are expected from the proposed action.

Transportation

The proposed action would require transportation of dirt/gravel from an existing gravel pit for placement in the proposed area. A road currently runs from the gravel pit to an existing target (TS2) located adjacent to the proposed target location. This allows transportation of the assets to be accomplished within the AF boundaries utilizing existing infrastructure. A new 600' road will be required. The proposed activities would not otherwise impact the existing transportation at the South Range or the surrounding communities.

Socioeconomics

The proposed action would have no significant adverse impact on the local economy or employment. Testing operations at UTTR would use the proposed target pond to obtain critically important munitions effects data. The new target would not generate new jobs or business opportunities. Leaving the pond in place following the initial testing operation will provide valuable assets to current and future range users. By increasing the range's capabilities, the Hill AFB increases its overall value as a DoD asset.


Cumulative Impacts

There are no expected adverse cumulative impacts from the proposed action. The number of sorties and testing and training operations are not expected to increase as a result of the proposed action. Therefore, noise and air quality impacts are not expected to increase.

Conclusion

Based upon the analyses conducted for this EA, no resources were identified that would be significantly impacted by the construction of the Pond target on the South Range of the Utah Test and Training Range. Therefore, in accordance with 32 CFR Part 989, a Finding of No Significant Impact may be issued, and the preparation of an Environmental Impact Statement (EIS) is not necessary.

Hill Air Force Base, Utah



Authorized Signature

12 JAN 05

Date

STAFF SUMMARY SHEET

	TO	ACTION	SIGNATURE (Surname), GRADE AND DATE		TO	ACTION	SIGNATURE (Surname), GRADE AND DATE
1	75 CEG/ CEVOR	Coord		6	75 CEG/ CC	Sig	<i>[Signature]</i> 12 JAN 05
2	75 ABW/ JAE	Coord	<i>Cutler, GS-13 22 DEC 04</i>	7			
3	75 ABW/ JA	Coord	<i>Well, MAJOR, 7 JAN 05</i>	8			
4	388 RANS RSOCC	Coord	<i>J. Reed 11 Jan 05</i>	9			
5	75 CEG/ CD	Coord	<i>[Signature]</i>	10			

SURNAME OF ACTION OFFICER AND GRADE	SYMBOL	PHONE	TYPIST'S INITIALS	SUSPENSE DATE
Kay Winn, GS-12	75CEG/CEVOR	DSN 777-0383	<i>[Signature]</i> kp	

SUBJECT	DATE
Environmental Assessment for Pond Target at the South Range of the Utah Test and Training Range	20041221

SUMMARY

1. An Environmental Assessment (EA) Tab 3, has been prepared to determine whether implementation of construction of the Proposed Pond Target Array at the South Range of the Utah Test and Training Range would have a significant impact on human health or the environment. The purpose of the proposed action is to provide a target array for testing the detrimental effect of water on detonation of a submission known as a BLU97/B. In order to conduct the proposed test, it will be necessary to construct a contained "pond" in a controlled area. The proposed pond target array will consist of a 250' x 250' pond, up to 15 feet deep. Once the proposed target array is constructed, lined, and filled with water, a boat will be tethered in the center of the pond to act as the actual target. Data will be collected by cameras installed at port-holes in the boat as well as external camera arrays located to the east of the pond location at an existing target. An Executive Summary is located at Tab 2.
2. The EA was prepared in accordance with the National Environmental Policy Act of 1969 and 32 CFR Part 989.
3. RECOMMENDATION: 75 CEG/CC, Commander, sign the FONSI, Tab 1.

[Signature]

W. ROBERT JAMES, PhD., P.E.
Chief, Environmental Management Division
Civil Engineer Group

- 3 Tabs
1. Finding of No Significant Impact
 2. Executive Summary
 3. Environmental Assessment

**ENVIRONMENTAL ASSESSMENT FOR THE POND TARGET AT THE
UTAH TEST AND TRAINING RANGE
HILL AIR FORCE BASE**

March 2004
Prepared for:
Ms. Kay Winn
75 ABW/CEVOR
7274 Wardleigh Road
Hill AFB, UT 84056-5137
E-Mail:kay.winn@hill.af.mil

Prepared by:
Ms. Kathy Vaux
388th RANS/RSO
6066 Cedar Lane
Hill AFB, UT 84056-5803
801-586-2551
DSN 586-2551
Cell: 801-510-9443
E-Mail:kathy.vaux@hill.af.mil

Prepared in accordance with the Department of Air Force Environmental Impact Analysis Process (EIAP) 32 CFR Part 989, Effective March 12, 2003, which implements the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) regulations.

FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED POND TARGET ARRAY AT THE SOUTH RANGE OF THE UTAH TEST AND TRAINING RANGE

Description of the Proposed Action

The proposed action is to establish a target array pond on the South Range. The approximate location of the proposed array is N 40 21.641 W 113 12.184. The construction will also require installing a 600' dirt/gravel road from a dirt/gravel source to the proposed target.

The proposed target array pond will consist of a 250' x 250' pond, up to 15 feet deep. The pond will be constructed by building four interconnected dirt walls. The material to build the walls will be dirt/gravel transported by truck from the nearest approved gravel pit. Once the four sides of the proposed pond have been put in place the interior area will be lined with a rubber pad to containerize the water and any debris. The pond will then be filled with water acquired by pumping from shallow depressions located throughout the range that fill with water from the shallow brine aquifer located beneath the west desert.

Summary of Environmental Impacts of the Proposed Action

Surface Water

Any surface water in the proposed area is present due to rainfall and winter snow-melt. The seasonal water is shallow and evaporates rapidly in the arid desert climate. During the summer months the ground in the area is usually dry, with mud or shallow water present in spring and winter. No permanent surface water is located in the area, with the nearest permanent surface water located at Blue Lake on Utah Division of Wildlife Resources land approximately 100 miles northwest of the proposed location. No significant impacts on surface water are anticipated as a result of the proposed action.

Groundwater

No impacts to groundwater are expected from the proposed action. Groundwater qualifies as "Class VI – SALINE GROUND WATER" under Rule 317-6-3.7, Utah Administrative Rules (Mr. Bruce Evans, the 75 Air Base Wing AFB Chief of Environmental Law & Real Estate). The groundwater is less than 10 feet deep throughout the extensive salt flats of the Great Salt Lake Desert, around Great Salt Lake, and beneath wet playas, along streams, and near lakes in many of the lowland areas. (Text: Suzanne Hecker, Kimm M. Harty, and Gary E. Christenson, 1988, *Shallow Ground Water and Related Hazards in Utah*) Mr. Marcus Blood, the Hill AFB Natural Resources Manager, has reported a shallow heavily brined aquifer in the proposed area at a depth ranging from 1' to 8'. Most precipitation to the area quickly evaporates.

Soils

Any impacts on soils in the area due to the proposed action would result from construction of a 600' road to the proposed target site, and the placement of dirt/gravel to form the bermed walls of the target array. Because the target will be constructed on top of the soil and the interior of the pond will be lined with rubber to contain the water and any munitions directed toward the target ground disturbance will be minimized.

Vegetation

No significant impacts to vegetation are anticipated in the placement of the target array. The target array will be constructed in an area that is salt flat terrain and virtually free of vegetation. Construction of the target array will be conducted by driving along existing roads to the target that is currently located adjacent to the proposed location. A 600' road will be constructed to join the two areas. That, too, is located on salt flat terrain with virtually no vegetation present. No endangered or threatened species of plants are known to exist in the proposed area.

Wetlands

The proposed action does not affect wetlands. Blue Lake, the closest jurisdictional wetland area, is approximately 100 miles northwest of the proposed action. The proposed action qualifies for a Utah "permit by rule" determination for the test water discharges.

Air Quality

The proposed action would have no significant impact on air quality. Placement of the proposed target array would not produce any significant changes in air emissions at the South Range. The placement of the array is not expected to cause or create any change in the quantity of aircraft currently flying over the area or any sensitive areas.

Wildlife

The proposed action would have no adverse impact on wildlife. No federally listed threatened or endangered species reside at the site.

Cultural Resources

The target array will be placed in a location that has already undergone a cultural resources inventory. No eligible sites have been identified in the vicinity of the current project area. Prior to construction of the target array the Hill AFB Archaeologist will be notified and may wish to monitor any activities. During construction, personnel will cease work and notify the Archeologist if their activities uncover any suspected cultural sites. Close coordination with the Hill AFB Cultural Resource Office will be maintained during the construction and placement of the target array.

Land Use

Placement of the target array pond is consistent with the current Department of Defense military testing and training operations of the UTTR. The new target array would provide valuable data to further the mission of the Department of Defense and increase the capabilities at the South Range and would not adversely impact land use.

Noise

No increased activities are anticipated as a result of the placement of the proposed target array; therefore, no noise impact is anticipated.

Health and Safety

Because the proposed target array is designated with a rubber liner inside the pond to contain water and/or ordnance no new long-term health and safety hazards are expected from the proposed action.

Transportation

The proposed action would require transportation of dirt/gravel from an existing gravel pit for placement in the proposed area. A road currently runs from the gravel pit to an existing target (TS2) located adjacent to the proposed target location. This allows transportation of the assets to be accomplished within the AF boundaries utilizing existing infrastructure. A new 600' road will be required. The proposed activities would not otherwise impact the existing transportation at the South Range or the surrounding communities.

Socioeconomics

The proposed action would have no significant adverse impact on the local economy or employment. Testing operations at UTTR would use the proposed target pond to obtain critically important munitions effects data. The new target would not generate new jobs or business opportunities. Leaving the pond in place following the initial testing operation will provide valuable assets to current and future range users. By increasing the range's capabilities, the Hill AFB increases its overall value as a DoD asset.

Cumulative Impacts

There are no expected adverse cumulative impacts from the proposed action. The number of sorties and testing and training operations are not expected to increase as a result of the proposed action. Therefore, noise and air quality impacts are not expected to increase.

Conclusion

Based upon the analyses conducted for this EA, no resources were identified that would be significantly impacted by the construction of the Pond target on the South Range of the Utah Test and Training Range. Therefore, in accordance with 32 CFR Part 989, a Finding of No Significant Impact may be issued, and the preparation of an Environmental Impact Statement (EIS) is not necessary.

Hill Air Force Base, Utah

Authorized Signature

Date

EXECUTIVE SUMMARY

The Department of Defense has identified a need to provide a target array for testing the detrimental effect of water on detonation of a submission known as a BLU97/B. In order to conduct the proposed test it will be necessary to construct a contained “pond” in a controlled area.

The proposed pond target array will consist of a 250’x250’ pond, up to 15 feet deep. The pond will be constructed by building four interconnected dirt walls. The material to build the walls will be dirt/gravel transported by truck from the nearest approved gravel pit. Once the four sides of the proposed pond have been put in place the interior area will be lined with a rubber pad to containerize the water and any debris. The pond will then be filled with water acquired by pumping from shallow depressions located throughout the range that fill with water from the shallow brine aquifer located beneath the west desert.

Once the proposed target array is constructed, lined, and filled with water a boat will be tethered in the center of the pond to act as the actual target. Data will be collected by cameras installed at port-holes in the boat as well as external camera arrays located to the east of the pond location at an existing target.

Air Force instructions require that Environmental Assessments (EAs) be completed for all proposed Air Force actions with the potential for adverse environmental impacts. Under the proposed action, the new target will be constructed in an area adjacent to an existing target where tests are conducted on the same type of weapons system. Placement of the new target in the preferred location will require minimal construction of new roads, other than a road “leg” approximately 600 feet long connecting the existing road to the proposed location. No new photo-optic infrastructure will need to be installed because of the proximity of the infrastructure at the currently existing target site (identified as target site 2, or TS2) located just east of the preferred location. The center of the pond target will be located 800 feet due west of the camera pads already installed on TS2. The cameras can simply be redirected toward the proposed target without having to install or move them. The proposed construction does not require a state or Federal National Pollution Discharge Elimination System (NPDES) (water) discharge permit.

The target pond will be constructed on top of the existing ground surface and no digging in the area will be involved in placement of the array. Under the no-action alternative, no target array suitable for obtaining the required data would be available. The no-action result would limit the testing and training opportunities available to the DoD customer.

Section 1 of this report presents the purpose and need for the proposed action. It also includes background information on the proposed action location.

Section 2 describes the proposed action and the alternative actions that were considered. Selection criteria for evaluating reasonable alternatives are also presented in this section.

Section 3 describes the existing environmental conditions at the site of the proposed action.

Section 4 identifies the anticipated environmental impacts of the proposed action and the alternatives.

Section 5 lists the individuals involved in preparing this report.

Section 6 lists persons contacted in preparing this report and Section 7 contains a list of references used in report preparation.

Based on the findings of this EA, the proposed action at Alternative Location 1 is not expected to have any significant adverse environmental impact. A Finding of No Significant Impact (FONSI) statement has been prepared and is included at the beginning of this report. Preparation of an Environmental Impact Statement (EIS) is not necessary.

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	ES-1
1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION	1-1
1.1 Introduction	1-1
1.2 Background	1-1
1.3 Need for the Proposed Action	1-1
1.4 Applicable Regulations	1-4
1.4.1 National Environmental Policy Act Requirement for Air Force Actions	1-4
1.4.2 Noise Emission Requirements	1-4
1.4.3 Cultural Resource Requirements	1-4
1.4.4 Natural Resource Requirements	1-5
2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	2-1
2.1 Site Selection Criteria	2-1
2.2 Description of Alternatives	2-1
2.2.1 Alternative 1 – Proposed Action	2-2
2.2.2 Alternative 2 – Alternate Location	2-3
2.2.3 Alternative 3 – Alternate Location	2-3
2.2.4 Alternative 4 – Alternate Location	2-3
2.2.5 Alternative 4 – No-Action Alternative	2-4
2.3 Decision Matrix Table	2-6
3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT	3-1
3.1 Surface Water	3-1
3.2 Groundwater	3-1
3.3 Geology and Soils	3-1
3.4 Vegetation	3-3
3.5 Wetlands	3-3
3.6 Air Quality	3-3
3.7 Wildlife	3-5
3.8 Cultural Resources	3-5
3.9 Land Use	3-6
3.10 Noise	3-6
3.11 Health and Safety	3-6
3.12 Transportation	3-7
3.13 Socioeconomic	3-7
4.0 ENVIRONMENTAL CONSEQUENCES	4-1
4.1 Surface Water	4-1
4.2 Groundwater	4-1
4.3 Geology and Soils	4-1
4.4 Vegetation	4-2
4.5 Wetlands	4-2
4.6 Air Quality	4-2
4.7 Wildlife	4-2

TABLE OF CONTENTS
(Continued)

	Page
4.8 Cultural Resources -----	4-3
4.9 Land Use -----	4-3
4.10 Noise -----	4-3
4.11 Health and Safety -----	4-4
4.12 Transportation -----	4-4
4.13 Socioeconomics -----	4-4
4.14 Environmental Justice -----	4-5
4.15 Cumulative Impacts -----	4-5
5.0 LIST OF PREPARERS -----	5-1
6.0 LIST OF PERSONS CONTACTED -----	6-1
7.0 REFERENCES -----	7-1

LIST OF FIGURES

	Page
1-1 Utah Test and Training Range -	1-3
2-1 Location of Proposed Targets on South Range.....	2-5
3-1 Surface Water Features on the South Range	3-2
3-2 Vegetation on South Range.....	3-4

LIST OF ACRONYMS

ACC Air Combat Command
ACHP Advisory Council on Historic Preservation
AFB Air Force Base
AFI Air Force Instruction
AFMC Air Force Materiel Command
AICUZ Air Installation Compatible Use Zone
ALC Air Logistics Center
BLM Bureau of Land Management
BRAC Base Realignment and Closure Commission
CFR Code of Federal Regulations
dB Decibel unit
DoD Department of Defense
EA Environmental Assessment
EIS Environmental Impact Statement
EPA Environmental Protection Agency
FONSI Finding of No Significant Impact
 L_{dnmr} Day-night average sound level
MOA Military Operating Airspace
MRTFB Major Range and Test Facility Base
NAAQS National Ambient Air Quality Standards
NCA Noise Control Act
NEPA National Environmental Policy Act
NHPA National Historic Preservation Act
NRHP National Register of Historic Places
OSHA Occupational Safety and Health Administration
SHPO State Historic Preservation Officer
SO₂ Sulfur dioxide
THPO Tribal Historic Preservation Officer
UDWR Utah Division of Wildlife Resources
USAF United States Air Force
U.S.C. United States Code
UTTR Utah Test and Training Range
UXO Unexploded Ordnance

Section 1

PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

The Utah Test and Training Range (UTTR) is located in northwestern Utah, approximately 70 miles west of Salt Lake City, Utah. Air Combat Command (ACC) is responsible for range operations, while Air Force Materiel Command (AFMC) has stewardship over the real property, including environmental support and compliance. The UTTR supports large footprint weapons testing and is designated a Major Range and Test Facility Base (MRTFB). The UTTR serves a variety of Department of Defense (DoD) customers for training exercises, test functions, and support services.

The UTTR consists of restricted air space, military operating areas (MOA) and DoD and public land under the Airspace. The DoD land in the UTTR is managed by the Air Force and Army (Dugway Proving Grounds). As shown in Figure 1-1, The UTTR is divided into two operating areas, the North Range and South Range. This document will address only those lands on the South Range operated by the Air Force.

The Air Force proposes to construct a target array pond on the southeast side of the South Range. The target will be utilized to obtain data on the detrimental effect of water on detonation of the BLU97/B submunition.

1.2 Background

What is currently known as the UTTR was established for bombing and gunnery training during World War II. It is divided into two distinct areas with I-80 running between the northern and southern sections. Following the 1995 BRAC Actions the ownership of the UTTR was assigned to Hill AFB Air Logistics Center (OO-ALC), while the operation of the Range as a DoD testing/training asset was assigned to Air Combat Command (ACC).

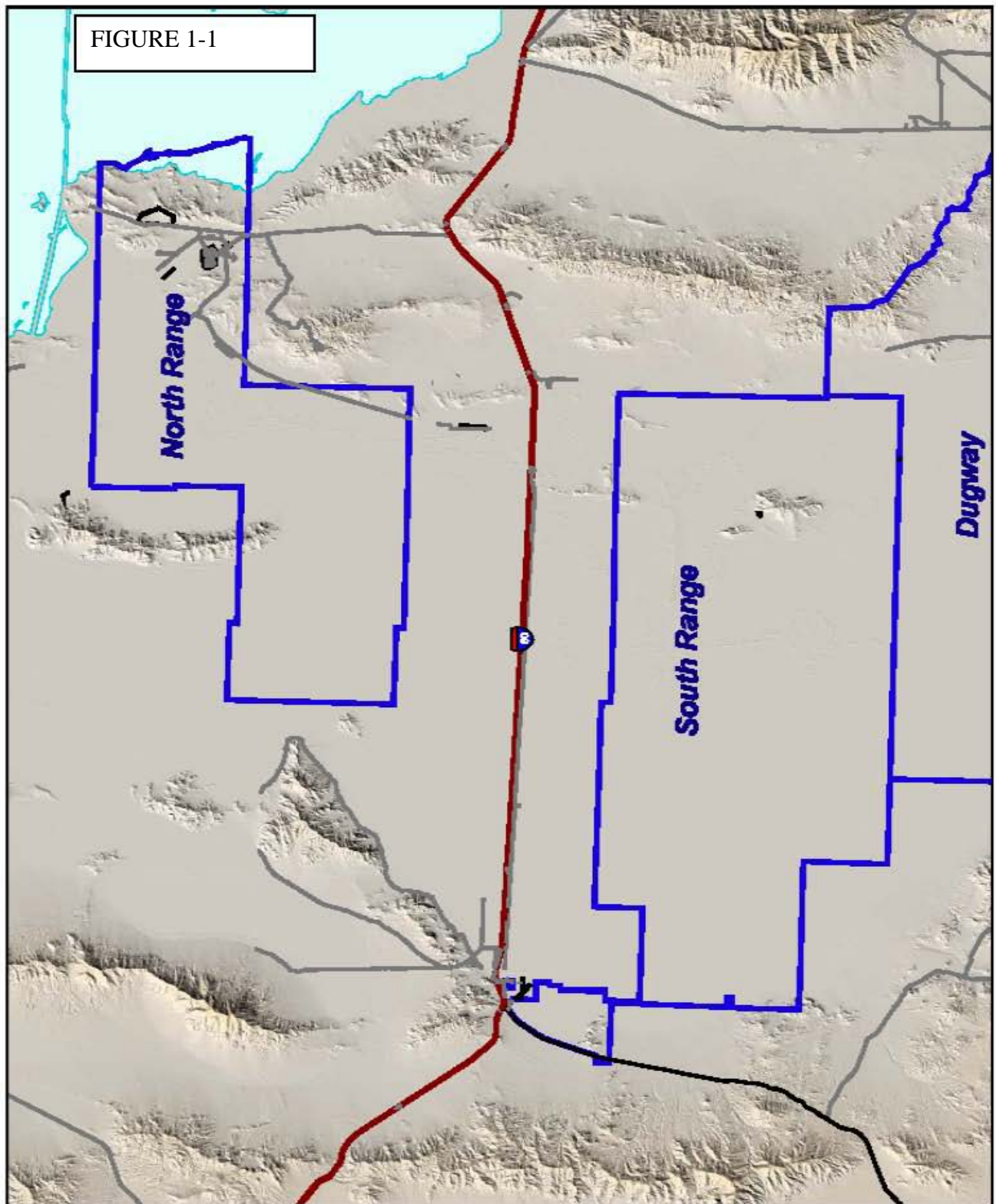
Currently, the north and south ranges combined consist of almost one million acres of land. Because of the proximity to the Wasatch Front population, the UTTR is easily accessible but has minimal encroachment issues. The UTTR now serves a variety of customers for training exercises, test functions, and support services.

1.3 Need for the Proposed Action

The Department of Defense has identified a need to provide a target array for testing the detrimental effect of water on detonation of a submission known as a BLU97/B. In order to conduct the proposed test it will be necessary to construct a contained “pond” in a controlled area.

The proposed target array pond will consist of a 250' x 250' pond, up to 15 feet deep. The pond will be constructed by building four interconnected dirt/gravel walls. The material to build the walls will be transported by truck from the nearest approved gravel pit. Once the four sides of the proposed pond have been put in place the interior area will be lined with a rubber pad to containerize the water and any debris. The pond will then be filled with water acquired from existing fresh-water wells or by pumping brine from shallow depressions located throughout the range and contain water from the aquifer located beneath the west desert.

Once the proposed target array is constructed, lined, and filled with water, a large boat will be tethered in the center of the pond to act as the actual target. The boat will not contain any fuels, oils or other potential hazardous substances. Data will be collected by cameras installed at port-holes in the boat as well as external camera arrays located to the east of the target area.



1.4 Applicable Regulations

There are several regulatory environmental programs that apply to the proposed action. These include the program requirements described below.

1.4.1 National Environmental Policy Act Requirements for Air Force Actions

The *National Environmental Policy Act (NEPA) of 1969* requires federal agencies to analyze the potential environmental impacts of a proposed action and to evaluate reasonable alternative actions. The results of the analyses are used to make decisions or recommendations on whether and how to proceed with those actions. Air Force Instruction (AFI) 32-7061 describes the process of preparing an EA for proposed actions on Air Force property. Based on the EA, either a Finding of No Significant Impact (FONSI) or an Environmental Impact Statement (EIS) is prepared. This EA looks at the environmental impacts of the proposed action and the no-action alternative. Both the AFI 32-7061 guidance and the implementing regulations of NEPA (40 *Code of Federal Regulations* [CFR] 1500) were followed in preparing this EA.

1.4.2 Noise Emission Requirements

Noise pollution is regulated by the *Noise Control Act (NCA) of 1972*. The NCA requires federal facilities to implement measures to reduce noise emissions. Generally, federal agencies whose activities result in increased environmental noise in the surrounding community are responsible for compliance with state and local environmental noise requirements. The State of Utah has no noise control regulations, although Utah Code 10-8-16 gives cities the authority to develop noise control regulations or standards.

1.4.3 Cultural Resource Requirements

The *National Historic Preservation Act (NHPA) of 1966, as amended through 2000* [16 U.S.C. Part 470 *et seq.*], is the cornerstone of Federal cultural resources management law. It establishes a national historic preservation program that includes elements for identification, evaluation, and protection of cultural resources. NHPA presents a policy of supporting and encouraging the conservation of *historic properties* or *historic resources* – the terms used to refer to “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places including artifacts, records, and material remains related to such a property or resource” [16 U.S.C. Part 470w(5)] – by directing Federal Agencies to assume responsibility for those cultural resources under Federal jurisdiction judged to be significant.

Section 106 of NHPA [16 U.S.C. Part 470f] ensures that cultural resources are properly considered in the planning stage of any Federal agency activity. Federal agencies are required to consider the effects of their undertakings on any properties eligible for inclusion in, or listed on, the National Register of Historic Places (NRHP) during the planning stage and to provide the Advisory Council on Historic Preservation (ACHP) an opportunity to comment. This process is detailed in implementing regulation 36 CFR Part 800 (Protection of Historic Properties). Section 106 does not require that an undertaking be stopped, but reasonable efforts must be made to minimize harm to eligible properties until the consultation process is completed.

The reissued 36 CFR Part 800 regulation (effective January 11, 2001) provides for increased involvement with additional consulting parties. These consulting parties include the SHPO, the THPO when applicable, American Indian tribes, local governments, applicants for

Federal permits or licenses, and the public, including individuals and organizations which have a demonstrated interest in the outcome of any undertaking [36 CFR Part 800.2(c)]. The SHPO, in particular, has an important role because this Agency is the first line of external review on Federal actions requiring compliance with Section 106.

Other directives outlining the responsibilities of Federal agencies for preservation of cultural resources include: *AFI 32-7065*, *The Antiquities Act of 1906* [16 U.S.C. Part 431-433], *Archaeological Resources Protection Act of 1979* [16 U.S.C. Part 470aa et seq.], *Native American Graves Protection and Repatriation Act of 1990* [25 U.S.C. Part 3001-3013], *American Indian Religious Freedom Act of 1978* [42 U.S.C. Part 1996], along with numerous Executive Orders, Presidential Memoranda, and Department of Defense Directives and Policies.

1.4.4 Natural Resource Requirements

The *Endangered Species Act of 1973* provides for the designation and protection of invertebrates, wildlife, fish, and plant species that are in danger of becoming extinct and conserves the ecosystems on which the species depend. Endangered species are animals or plants listed by regulation as being in danger of extinction. Threatened species are animals or plants that are likely to become endangered within the foreseeable future. Candidate species are animals or plants that have been selected for evaluation for inclusion on the threatened and endangered species lists. Candidate species may be considered for immediate listing if significant parts of their habitat are threatened by human impact.

The *Migratory Bird Treat Act* protects migratory birds. Migratory birds are of great ecological and economic value to this country and to other countries. They contribute to biological diversity and bring tremendous enjoyment to millions of Americans who study, watch, feed, or hunt these birds throughout the United States and other countries. The United States has recognized the critical importance of this shared resource by ratifying international, bilateral conventions for the conservation of migratory birds. Such conventions include the Convention for the Protection of Migratory Birds with Great Britain on behalf of Canada 1916, the Convention for the Protection of Migratory Birds and Game Mammals-Mexico 1936, the Convention for the Protection of Birds and Their Environment- Japan 1972, and the Convention for the Conservation of Migratory Birds and Their Environment-Union of Soviet Socialist Republics 1978.

The *Soil and Water Conservation Act of 1977* provides for a continuing appraisal of U.S. soil, water and related resources, including fish and wildlife habitats, and a soil and water conservation program to assist landowners and land users in furthering soil and water conservation.

The *Clean Water Act (CWA) of 1972* provides for the designation and protection of Waters of the United States. If a body of water does not meet the definition of “waters of the United States,” it may still be subject to state regulation. Utah has published rules regulating ground water. The interim goal of the Clean Water Act is to make the water safe for fishing and swimming, eliminate harmful discharges of any pollutant into waters of the United States. It also requires protection of the nation’s special aquatic sites including wetlands. Discharges that would contaminate state or US waters require a federal National Pollution Discharge Elimination System (NPDES) or state-equivalent permit. Proposed dredge and fill activities effecting special aquatic sites require an Army Corps of Engineer’s permit.

Section 2

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section describes the proposed action and alternatives for construction and operation of a water filled target array pond at UTTR-South. The selection criteria for site location are presented, and the proposed and alternative actions are described.

2.1 Site Selection Criteria

UTTR-South was selected for construction and operation of the new target array pond because of its unique characteristics as discussed in Section 1. The criteria for selecting a target complex site within the UTTR-South for this target are as follows:

- The selected site shall not interfere with the mission of Hill AFB or the Utah Test and Training Range, nor adversely affect DoD facilities
- The selected site should be located in an area of the UTTR that is near currently existing active targets to minimize the impact of munitions testing/training on the environment.
- The selected site should be located distant from the perimeter boundary fence line in an area sufficient to contain the weapon's safety footprint.
- The selected site should be located near currently existing target infrastructure (i.e. cameras, fiber optic, etc.).
- The selected site should be located near or at an area where this type of weapon or similar types of weapons are already approved and used.
- The selected site should be located in an area where there are no known limiting factors (i.e. significant cultural resource sites, threatened or endangered species, etc.).

Sites not meeting the above criteria were not considered further. The preferred site located at GPS Coordinates N40 21.641 W113 12.184 is the only area that meets all the requirements for selection. The site selected is located well within the boundary of the UTTR in an area that has no significant vegetation, wildlife or known cultural resources. The center of the proposed target array pond is located approximately 800 feet west of an existing target (TS2) where the same type of weapon is utilized for testing/training purposes. The existing target area also has the photo infrastructure in place. The cameras that are currently in place can simply be turned to the west to direct the focus to the new target for the duration of the proposed test. An authorized sand/gravel pit is within close proximity to the preferred site, limiting the travel distance required to construct the target. The area selected is located away from other active target areas on the UTTR. That will allow the ability to use multiple areas of the range simultaneously without encroachment on other testing/training missions.

2.2 Description of Alternatives

This section describes the 5 alternatives considered for this EA.

- Alternative 1 is the proposed action. It includes placement and maintenance of the proposed target array.

- Alternative 2 is located near the TS-4 target complex on the S-UTTR, approximately 7 miles west of the location described at alternative 1, and includes placement and maintenance of the proposed target array.
- Alternative 3 is located near the Wildcat Mountain target complex, approximately 27 miles NW of alternative 1, and also includes placement and maintenance of the proposed target array.
- Alternative 4 is located near TS-5 target complex, approximately 45 miles NW of alternative 1, and also includes placement and maintenance of the proposed target array.
- Alternative 5 is the no-action alternative. This alternative assumes no pond target placement on the South Range.

The following information will apply to Alternatives 1 through 4, which all address establishment of an above ground pond target array, with location being the variation. This information will not apply to alternative 5, the no action alternative.

- Construct a lined pond with dirt/gravel walls and rubber liner. The pond will have an inside dimension of approximately 250 feet by 250 feet. The liner of the pond will be constructed of rubber, and will cover the bottom and the bermed sides. The pond will be filled with water from local sources to a depth of 20 to 30 feet.
- A boat will be tethered to the center of the pond as the center point target.
- A Wind Corrected Munition Dispenser (WCMD) CBU-103 will be directed toward the center of the boat floating in the pond. The CBU-103 is a weapon system that contains BLU-97/B submunitions. These submunitions will impact the boat and/or the pond.
- Following completion of the test the pond will be drained into the surrounding environment.
- Once the pond is drained the munitions that impacted the pond will be cleared in accordance with applicable Explosive Ordnance Disposal (EOD) guidance and regulations.
- The berms/walls of the pond will remain in place as a possible future target. Any possible future use would be consistent with the proposed action.

2.2.1 Alternative 1 – Proposed Action The proposed action is to establish a pond target array in the area of the UTTR-South approximately 800 feet west of the TS2 target that is currently utilized for the type of weapon to be tested. The approximate center of the proposed pond will be located at N40 21.641 W113 12.184.

The proposal is to construct a pond on top of the existing ground surface. The interior of the pond will measure 250'x250'. No digging will be done at the site. All surfaces of the pond will be constructed by bringing dirt and gravel from one of the approved gravel pits located throughout the UTTR. The material will be placed on top of the ground at the proposed target site location to build "berm" walls on all four sides. The finished dirt structure will have an internal measurement of 250 feet wide by 250 feet long by 20 to 30 feet tall. The inside of the

dirt/gravel walls will be lined with rubber sheeting, both to assist in containment of the water and to containerize any weapons that are directed toward the target. Water will be pumped from existing fresh water wells or shallow “fill” ponds located at various sites on the south Range, then transferred by pump truck into the target pond to obtain the desired fill level. Following the filling of the pond a boat will be placed into the pond and tethered from front, rear and both sides to hold it firmly in the center of the pond. The boat is the actual target for the test to be conducted. The boat will not contain any petroleum, oils, or other hazardous materials. Following the test the target wall will be breached to allow drainage of the water. All ordnance that has fallen into the bottom of the “pond” will be removed and rendered safe in accordance with Explosive Ordnance Disposal guidelines and regulations. The boat will be rendered safe and removed as well. The walls of the structure will remain in place pending future use as a target. Future use, if any, will be essentially similar to the proposed alternate.

2.2.2 Alternative 2 – Alternate Location Alternative 2 is to place the proposed target in a located near the TS-4 target complex on the S-UTTR, approximately 7 miles west of the location described at alternative 1, and includes placement and maintenance of the proposed target array. As shown in Figure 2-2, the approximate location of the proposed array is N40 21.5 W 113 16.7. The proposed coordinate location for Alternative 2 is flexible within ½ mile in any direction to facilitate placement of the proposed target array. The final decision for exact placement will be made in coordination with Cultural and Natural Resource Managers and will be based in part on topography, ground type, and ground cover. Since the purpose of the proposed target is to capture photographic data derived from the test the availability and cost to install the photo support equipment will also be a factor in determining final placement of the target array pond.

2.2.3 Alternative 3 – Alternate Location Alternative 3 is located near the Wildcat Mountain target complex, approximately 27 miles NW of alternative 1, and also includes placement and maintenance of the proposed target array. As shown in Figure 2-2, the approximate location of the proposed array is N 40 29.4 W 113 19.4. The proposed coordinate location for Alternative 3 is flexible within ½ mile in any direction to facilitate placement of the proposed target array. The final decision for exact placement will be made in coordination with Cultural and Natural Resource Managers and will be based in part on topography, ground type, and ground cover. Since the purpose of the proposed target is to capture photographic data derived from the test the availability and cost to install the photo support equipment will also be a factor in determining final placement of the target array pond.

2.2.4 Alternative 4 – Alternate Location Alternative 4 is located near TS-5 target complex, approximately 45 miles NW of alternative 1, and also includes placement and maintenance of the proposed target array. As shown in Figure 2-2, the approximate location of the proposed array is N 40 26.6 W 113 31.8. The proposed coordinate location for Alternative 4 is flexible within ½ mile in any direction to facilitate placement of the proposed target array. The final decision for exact placement will be made in coordination with Cultural and Natural Resource Managers and will be based in part on topography, ground type, and ground cover. Since the purpose of the proposed target is to capture photographic data derived from the test the availability and cost to

install the photo support equipment will also be a factor in determining final placement of the target array pond.

2.2.5 Alternative 5 – No-Action Alternative If no action occurs the target array will not be constructed on the Utah Test and Training Range.

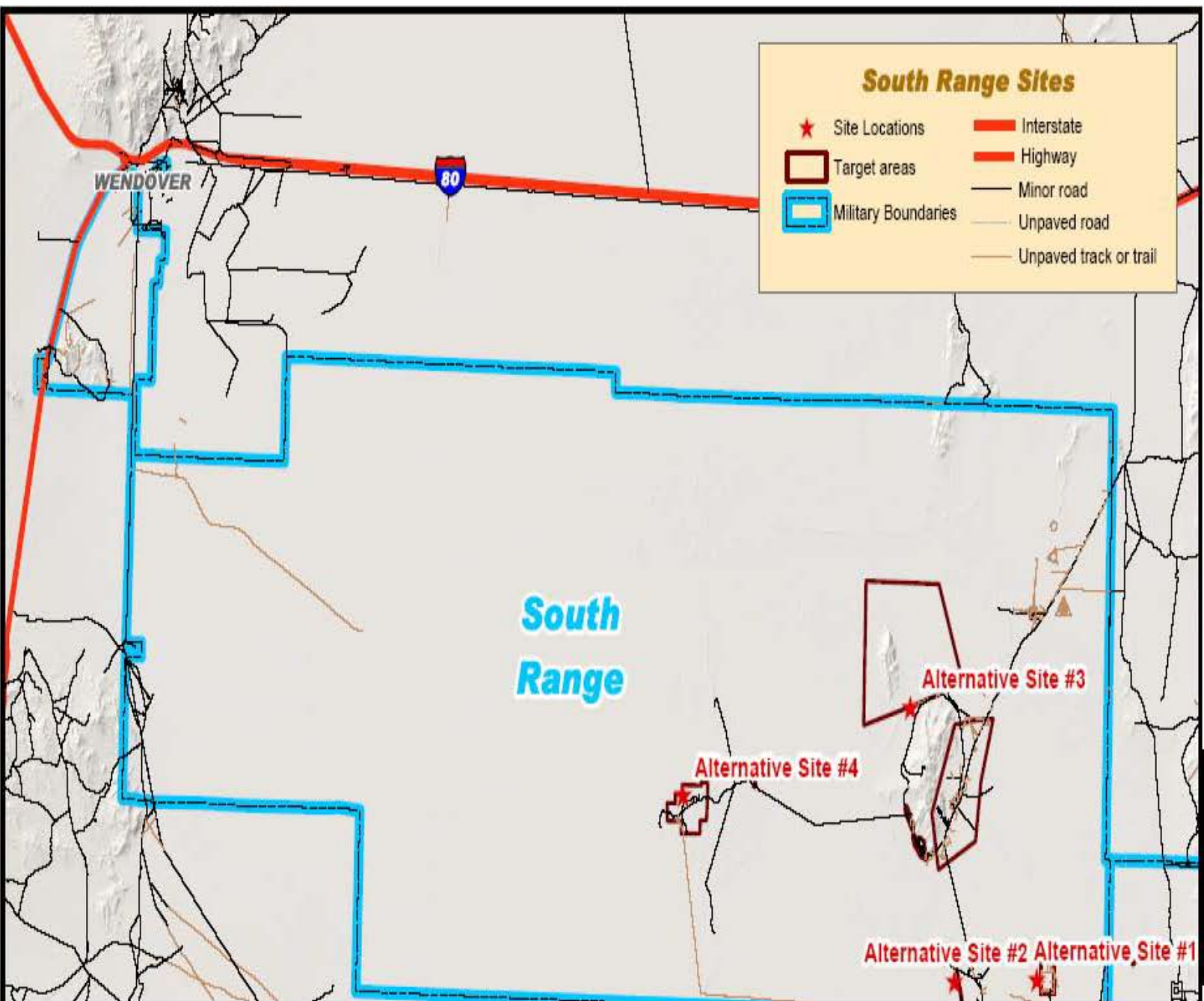


Figure 2-1

2.3 Decision Matrix Table

The following decision matrix table was used in comparing the alternative actions:

ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	SELECTION CRITERIA
Y	N	N	N	N	The selected site shall not interfere with the mission of Hill AFB or the Utah Test and Training Range, nor adversely affect DoD facilities
Y	Y	Y	Y	N/A	The selected site should be located in an area of the UTTR that is near currently existing active targets to minimize the impact of munitions testing/training on the environment.
Y	Y	Y	Y	N/A	The selected site should be located distant from the perimeter boundary fence line in an area sufficient to contain the weapon's safety footprint.
Y	Y	N	Y	N/A	The selected site should be located near currently existing target infrastructure (i.e. cameras, fiber optic, etc.).
Y	N	N	N	N/A	The selected site should be located near or at an area where this type of weapon or similar types of weapons are already approved and used.
Y	Y	N	N	N/A	No known limiting factors in the selection area (i.e. significant cultural resource sites, threatened or endangered species, etc.).

Y = Meets selection Criteria

N = Does not meet selection Criteria

Section 3

DESCRIPTION OF THE EXISTING ENVIRONMENT

This section describes the current environment at the South Range in the vicinity of the proposed action with regard to cultural and natural resources and physical conditions.

3.1 Surface Water

No perennial springs exist in the area of the proposed action. The nearest perennial spring is located approximately 70 miles NW of the proposed location at the Blue Lakes area. Several hundred acres of land in the Blue Lakes area have been deeded to the State of Utah. The only flows in the stream channels on the South Range are found just below perennial springs and generally infiltrate within a short distance. Most of the precipitation that falls in the area is quickly discharged by evaporation or is stored temporarily as soil moisture and then discharged by evapotranspiration (Gates and Druer 1981; Stephen 1974). Figure 3-1 shows surface water features on the South Range. (Source: Final Range management Plan for the Hill Air Force Range and Wendover Air Force Range of the UTTR, Jan 1997 EA). No dredge or fill permits are required.

3.2 Groundwater

Groundwater can be found in the unconsolidated and consolidated rocks beneath the South Range. Recharge of the groundwater typically occurs by precipitation falling at higher elevations. Water reaches the groundwater reservoir by seepage from runoff and streams on alluvial slopes. The major groundwater reservoir is more than 1,000 feet thick. A shallow brine aquifer lies beneath the mudflat area of the playas soils and consists of lake bed clay and silt and crystalline salt. This groundwater is considered a "Class IV Saline Ground Water" in accordance with R317-6-3.7, Utah Administrative Rules. The State Division of Water Quality has determined the proposed action discharging the test water to the ground surface qualifies for a "permit by rule." Although these sediments extend to a considerable depth, only the upper 25 feet act as an aquifer (EnviroSupport, 1998).

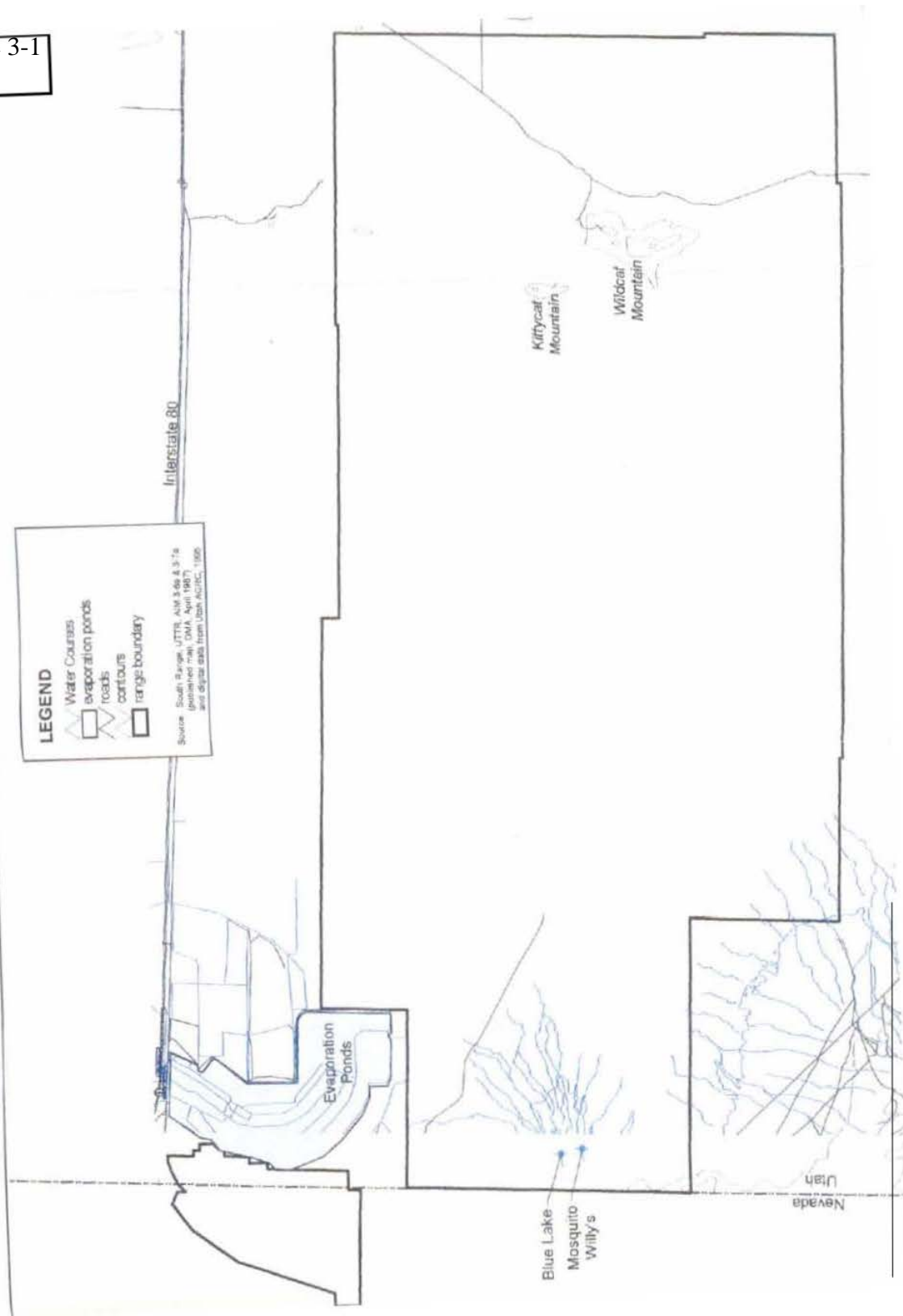
3.3 Geology and Soils

Geology

The South Range is part of the Great Basin Region of the Basin and Range Physiographic Province, which is characterized by fault-block mountain ranges trending north and south, separated by alluvium-filled valleys and closed desert basins. During the late Pleistocene Epoch, Lake Bonneville covered the entire South Range area. Lake Bonneville was a freshwater lake that at its maximum extent covered an area of approximately 50,000 square kilometers and had a depth of more than 330 meters (Flint, 1971).

Wildcat and Kittykat Mountains are the only exposed rocks on the South Range. These mountains consist of Pennsylvanian dolomite and limestone. Some igneous rocks that are younger than Pennsylvanian are also found in the mountains. Similar exposed rocks are also present just west of the south range and across the Nevada line in the Snoopy Area and in the Lead Mine Hills (EnviroSupport, 1998).

Figure 3-1



Soils

The majority of the soils on the south range include playas, playas-saltair complex and salt flats. All of these soils have low permeability and drain slowly. The playa water capacity is very low, while the playas-saltair water capacity is low to very low. The proposed site for the target is playas, salt flat. Most soils on the range are not suitable for livestock grazing, range seeding, or irrigated crops. Between 9% and less than 0.5% of soils (Hiko Peak Gravelly Loam) on the UTTR-South are suitable for buildings and roads. (EnviroSupport, 1998) Those soils are concentrated along the slopes and upland areas on the east and west sides of the South Range. Data within the location of the preferred target area and surrounding areas consist of playas/salt flats (320,820 acres) and scattered areas of playas-Saltair Complex (88,203 acres) both north and west of the area. (Range Management Plan and Environmental Assessment for the Hill AFR and Wendover AFR of the UTTR Ver. 3.1, 1997).

3.4 Vegetation

The majority of the South Range is comprised of barren to sparsely vegetated mudflats. Arkush (1997b:21, 25) has identified a series of seven zones for the region comprising the South Range. Of these, the proposed target array site falls within what is defined as “Zone 1.”

Zone 1 is identified by its sediments over a predominately barren landscape. The vegetation that does grow in Zone 1 occurs in isolated accumulations of sandy silt and in shallow drainages associated with sheet runoff. Pickleweed (*Allenrolfea occidentalis*) is the dominant species, but other alkali-associated plants include seepweed or desert blight (*Suaeda* spp.), and occasionally saltsage (*Atriplex tridentate* or *A. falcatus*), shadscale (*Atriplex confertifolia*), big greasewood (*Sarcobatus vermiculatus*), and the introduced halogeton (*Halogeton glomeratus*). Pickleweed is dominant over most of Zone 1 as it is the most salt-tolerant of the Great Basin desert plants. (Final Report TS-5 Central Area and Craners Cultrual Resources Inventory, Utah Test and Training Range, Tooele and Box Elder Counties, UT, James A. Carter and D. Craig Young, Jr.) Workman et. Al. (1992c) identified slightly different cover types and provided vegetation types as well. The vegetation types listed by Workman are generally related to the cover types as shown in Figure 3-2. The vegetation types in the proposed area are shown as barrens and/or pickleweed barrens. (Range Management Plan and Environmental Assessment for the Hill AFR and Wendover AFR of the UTTR Ver. 3.1, 1997).

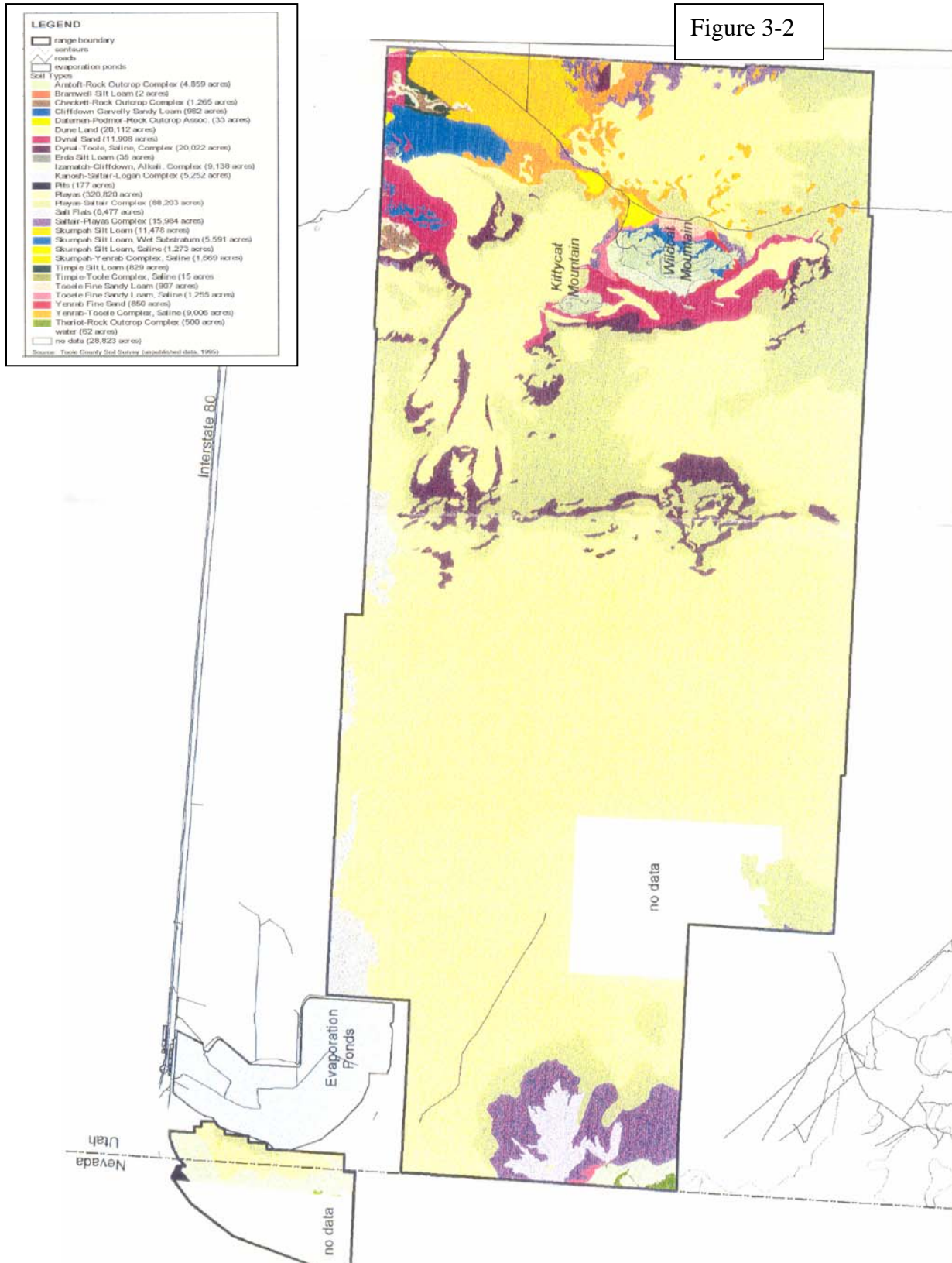
3.5 Wetlands

The total area of wetlands identified within the South Range was estimated at 22,245 acres (Parsons Engineering Science, 1995). The identified wetlands occur in the Blue Lake complex area, on the western border of the range. No jurisdictional special aquatic sites will be disturbed including wetlands.

3.6 Air Quality

The South Range is located in western Tooele County, which is currently designated as an attainment area for all National Ambient Air Quality Standards (NAAQS). East Tooele County above 5,600 feet is currently nonattainment for sulfur dioxide (SO₂).

Figure 3-2



3.7 Wildlife

Surveys were conducted in June 1998 to sample avian (bird), mammal, reptile, and terrestrial invertebrate populations that inhabit the area on South Range known as TS-5 (Hill AFB, 1998b). The TS-5 Area is located approximately 45 miles northwest of the proposed target site. Terrain on portions of TS-5 is considered Zone 1 terrain and is similar to the salt flat areas at the proposed target array location. While no studies of wildlife have been conducted in the specific area where the proposed target would be set, the wildlife studies that have been conducted on the South Range (with the closest study being conducted on TS-5 Area) are indicative of the known wildlife found over all of the South Range. Small mammals, rodents, and reptiles, as well as larger herbivores, are common to settings where shrubby plants and grasses are present but are less common on the mud flats where little plant life exists (Integrated Cultural Resources Management Plan 2004-2008).

Bird species found included: Barn Swallow, Eared Grebe, Horned Lark, Loggerhead Shrike, Prairie falcon, Sage sparrow, Sage thrasher and Short-eared owl. None of the avian species are considered threatened or endangered. The proposed action and alternatives are not expected to harm any migratory birds. A “take” permit is not required.

The majority of mammals inventoried in and around the TS-5 Area were deer mice. The presence of black tailed jackrabbits, coyote, kit fox, and badger was evident although, other than the jackrabbits, actual sightings were not obtained during the study. Of the mammals observed, none are considered threatened, endangered, or sensitive.

Only two reptile species, the sagebrush lizard and the short-horned lizard, were observed on TS-5. Of the reptiles observed, none are considered threatened, endangered, or sensitive.

Insect diversity and abundance on TS-5 is low. The majority of insects observed included Diptera (flies), Hymenoptera (bees and wasps), and microhymenoptera (very small parasite wasps). Of the insects observed, none are considered threatened, endangered, or sensitive.

3.8 Cultural Resources

The term “cultural resources” is very inclusive and refers to any place, site, building, structure, or object, or collection of these, that was built or used by people. Resources can be either prehistoric or historic. Some cultural resources, such as traditional cultural properties and sacred sites, may be a place without any visible evidence of human use or modification.

Cultural resources can be divided into three basic categories: archaeological, architectural, and traditional cultural properties or sacred sites. Archaeological resources are where prehistoric and historic activities measurably altered the earth (for example, pit houses, hearths) or where physical remains were deposited (for example, projectile points, pottery, cans, bottles). Architectural resources include standing buildings, dams, canals, bridges, or other structures. In general, architectural resources must be at least 50 years old to be considered eligible for inclusion in the National Register of Historic Places (NRHP). Structures less than 50 years old may warrant inclusion in the NRHP if they are exceptionally significant or have the potential to gain future significance (for example, Cold War era structures). Traditional resources are those associated with cultural practices and beliefs of a living community that are rooted in its history and are important in maintaining the continuing cultural identity of the community.

The Air Force has conducted or contracted for cultural resources inventories of over 260,000 acres, or about 27 percent of the UTTR. The greatest number of inventories has been

conducted in response to specific actions requiring Section 106 compliance; however, Section 110 inventories sponsored by Hill AFB have accounted for 220,745 acres. Cultural resources inventories to date have identified 317 archeological sites on the UTTR (Hill AFB ICRMP 2004).

The current project area was inventoried in 2004 in response to the Section 106 requirement for inventory of a proposed target site. No eligible archeological sites were recorded in the vicinity of the current project area. No architectural resources or traditional cultural properties have been identified in the current project area.

3.9 Land Use

The South Range is closed to the public and is used for military training and testing missions related to national defense. The primary use of the South Range is for military personnel and weapons systems training and testing exercises. Operations include air-to-air operations, air-to-surface operations, visual and radar bombing, and tactical maneuvers to test equipment and train personnel.

The majority of lands surrounding the South Range are publicly accessible, although some land in the vicinity is privately owned. Federal lands surrounding the South Range are managed by the DoD and the Bureau of Land Management (BLM). The BLM manages the land for multiple use, including livestock grazing, wildlife management, mining, and recreation. The area nearest the proposed target array site is mud-flat terrain, and therefore is not well suited to livestock grazing. The Blue Lake wildlife management area lies approximately 100 miles northwest of the proposed site.

3.10 Noise

For the purposes of this document, noise is defined as “unwanted” sound caused by activities that are not part of the natural setting of a locality and that are heard as such by people and animals.

Noise studies have been conducted in the past during the studies for Environmental Surveys (ES) and Environmental Impact Statements (EIS) conducted prior to the implementation of other projects on the South Range. It has been determined that of the towns and ranches located under the South Range airspace but outside of Department of Defense (DoD) controlled lands, only three ranches were estimated to have noise exposures of 65 Ldnmr or greater due to aircraft operations.

Because the placement of the proposed target array will be located well within the boundaries of the South Range adjacent to a currently existing target there is no anticipated increase in quantity, type or duration of present and expected noise impact.

3.11 Health and Safety

Safety and Occupational Health issues at the South Range include the dangers associated with unexploded ordnance. Due to the historical activity at the South Range, unexploded ordnance (UXO) may exist at any location within the range boundaries. The proposed target array is designated as a test target. Following completion of the test standard Air Force and DoD Instructions and Regulations will be implemented and followed for EOD clearance of the test site.

3.12 Transportation

Ground transportation access at South Range is limited to authorized personnel only. There is a road currently in existence leading to the TS2 target site adjacent to the proposed site. An additional road, approximately 600 feet long, will be constructed from the current test site to the proposed test site. The road will be constructed using the same material proposed for construction of the bermed walls of the pond.

3.13 Socioeconomic

The area surrounding the eastern border of the South Range is sparsely populated with no incorporated communities. The location of the South Range limits its influence on the socioeconomic conditions of any surrounding communities. However, the UTTR is an integral part of operations at Hill AFB and, therefore, has an effect on the socioeconomic condition of the Wasatch Front counties

Section 4

ENVIRONMENTAL CONSEQUENCES

This section describes the consequences of the 4 action alternatives and the no-action alternative on the environmental conditions discussed in Section 3.

4.1 Surface Water

Proposed Action (including Alternatives 1-4)

No significant impacts on surface water are anticipated as a result of the proposed action at any of the 4 alternate locations. The preferred area and the 3 alternate areas are comprised of salt flats and have no near-surface ground water present. The target asset utilized to make up the proposed target array will be environmentally prepared and all oils, fuels, fluids or hazardous material will be removed prior to transport and placement.

No-Action Alternative

The no-action alternative would not result in any impacts to surface water in the area.

4.2 Groundwater

Proposed Action (including Alternatives 1-4)

No impacts to groundwater are expected as a result of the proposed action at any of the four alternative locations. A shallow brine aquifer is located from 1 to 20 feet beneath the mud flats. This qualifies as a Class IV Saline Ground Water under Utah rules. Most precipitation to the area quickly evaporates. The proposed array will be constructed entirely above the existing ground surface. No digging will occur. The action does not require a federal NPDES or state-equivalent permit.

No-Action Alternative

The no-action alternative would not impact groundwater.

4.3 Geology and Soils

Proposed Action (including Alternatives 1-4)

No impacts to soils in the area are anticipated due to the proposed action. If the preferred location is utilized the ground disturbance would be minimized as compared to ground disturbance anticipated if Alternate Locations 2 through 4 are utilized. There are no roads existing from the nearest target site of alternatives 2, 3 or 4, and all of these locations would require a longer road compared to the estimated 600' road required at the preferred location. Once the road is completed to the intended destination there would be no significant difference in impact to soils. The target array would be placed on top of the soil without regard to site selection. The only soil disturbance anticipated would be from the vehicles transporting and placing the dirt/gravel to create the walls of the pond.

No-Action Alternative (including Alternatives 1-4)

The no-action alternative would result in no impacts to geology and soils in the area.

4.4 Vegetation

Proposed Action (including Alternatives 1-4)

Because the vegetation in the proposed area is sparse it is anticipated that very little disturbance will occur. Since any anticipated disturbance would occur as a result of transporting the dirt/gravel the selection of alternative sites 2 through 4 would necessitate a greater area of disturbance than alternative 1, the proposed location. A dirt road currently leads to the existing TS2 target array located adjacent to the preferred location. If Alternative sites 2 through 4 are selected it will be necessary to construct a longer route from the existing target sites to the proposed areas. All 4 alternative sites would require some length of ingress and egress road, but since the intent is to place the berm walls of the target array pond on top of the soil, placement related disturbance will be minimized. Since all four locations under consideration are located near other targets all disturbance will occur adjacent to an area that has been previously disturbed.

No-Action Alternative

The no-action alternative would result in no impacts to vegetation in the area.

4.5 Wetlands

Proposed Action (including Alternatives 1-4)

The proposed action does not involve sites on any wetland area. The Blue Lake area lies approximately 100 miles to the northwest of the preferred site, and 50 to 70 miles west/northwest of the other 3 alternative locations.

No-Action Alternative

The no-action alternative would have no impact on any special aquatic site including wetlands.

4.6 Air Quality

Proposed Action (including Alternatives 1-4)

There will be no significant increase in air emissions from the proposed action at any of the 4 Alternate Locations. Consequently, placement of the proposed target array will not produce any significant changes in air emissions at the South Range.

No-Action Alternative

The no-action alternative would have no impact on air quality.

4.7 Wildlife

Proposed Action (including Alternatives 1-4)

No federally protected species or habitats are known to exist in the proposed or alternate target array areas. Consequently, no significant adverse impacts to wildlife are expected from the proposed action.

No-Action Alternative

The no-action alternative would have no impact on wildlife.

4.8 Cultural Resources**Proposed Action (including Alternatives 1-4)**

As discussed in Section 3.8, the area for the proposed action has been inventoried for cultural resources, with none identified in the Area of Potential Effect. Therefore, the proposed action will be considered No Effect in accordance with 36 CFR § 800. The sites selected for Alternative Action 2 through 4 are outside of areas that have been surveyed. If Alternative Actions 2, 3 or 4 are selected a Cultural Resources survey will need to be accomplished prior to commencement of constructing the target array. Cultural Resource Manager will be notified of target construction, anticipated route and schedule, and consulted for exact placement regardless of site located.

No-Action Alternative

The no-action alternative would have no impact on cultural resources.

4.9 Land Use**Proposed Action (including Alternatives 1-4)**

Land on the South Range is typically used for military testing and training purposes. Developing the new target array at the proposed location is consistent with the operations of the UTTR. The placement of the target array in the proposed location at the Alternative 1 site will provide valuable cost savings to the Department of Defense because of the existing photo infrastructure located adjacent to the proposed site. Selection of Alternative 2 through 4 sites will provide the testing capability, but will first require the installation of the infrastructure to capture the photo data required.

No-Action Alternative

The no-action alternative would have no impact on current land use at the South Range.

4.10 Noise**Proposed Action (including Alternatives 1-4)**

The noise impacts associated with existing conditions at the South Range are described in Section 3 of this document. The proposed action would have no impact, neither increasing nor decreasing the number, type, or quantity of existing flights to and from the area over the UTTR.

As a result there will be no significant noise impacts associated with the utilization of the new target array at any of the proposed alternative locations (1 through 4).

No-Action Alternative

The no-action alternative would have no adverse noise impacts.

4.11 Health and Safety

Proposed Action (including Alternatives 1-4)

No new long-term health and safety hazards are expected from the proposed action, regardless of the alternative site selected for target placement. The proposed target array, regardless of location, will utilize the type of weapons system already employed at the Utah Test and Training Range. There are numerous regulations and instructions in place throughout the Air Force and the Department of Defense governing the cleanup and render-safe procedures for ordnance and unexploded ordnance.

No-Action Alternative

The no-action alternative would result in no significant impacts to health and safety at the South Range.

4.12 Transportation

Proposed Action (including Alternatives 1-4)

The majority of transportation to the proposed Alternative 1 area would be accomplished on the existing road, with construction of a short (est. 600') new road required. The proposed transportation activities would not adversely impact the existing transportation at the South Range. The placement of the Array at Alternative 2 through 4 sites would necessitate construction of roads slightly longer than the 600' required at alternative 1, but would not adversely impact the existing transportation at the South Range.

No-Action Alternative

The no-action alternative would not impact transportation at South Range.

4.13 Socioeconomics

Proposed Action (including Alternatives 1-4)

The asset placement at the proposed locations Alternatives 1 through 4 would not significantly impact the socioeconomics of the surrounding area. The new target array would not generate new jobs or business opportunities. However, the proposed target array would provide valuable testing information for the Department of Defense. By increasing the range's capabilities, the value of Hill AFB is increased as a DoD asset.

No-Action Alternative

The no-action alternative would not impact the socioeconomic conditions at the South Range.

4.14 Environmental Justice (including Alternatives 1-4)

Environmental justice analyses for NEPA documents attempt to determine whether a proposed action disproportionately impacts minority and poor populations. However, because the South Range is not located adjacent to any area with a significant population no such analysis was conducted.

4.15 Cumulative Impacts

Proposed Action (including Alternatives 1-4)

Because the proposed target array, regardless of Alternative site selection (Alternative 1, through 4), will be lined with thick rubber sheeting to contain the water and to collect the munitions minimal cumulative impact is anticipated. Therefore, noise and air quality impacts are not expected to increase.

No-Action Alternative

The no-action alternative would have no adverse impacts on the environment. However, it could have an adverse impact on the availability of the anticipated information for the Department of Defense, thereby having a negative impact on national security.

SECTION 5

LIST OF PREPARARERS

Sam Johnson, NEPA Program Manager, Hill Air Force Base, UT

Kay Winn, NEPA Project Manager, Hill Air Force Base, Utah

Kathleen Vaux, Environmental Protection Specialist, 388th RANS/RCO

Marcus Blood, Natural Resources Project Manager, Hill Air Force Base, UT

Jaynie Hirschi, Cultural Resource Project Manager/Archaeologist, Hill Air Force Base, UT

Sanford Moss, 75 ABW/CEVOR, Hill AFB, UT

Bruce Evans, 75 ABW/JAE, Hill AFB, UT

Kevin Cutler, 75 ABW/JAE, Hill AFB, UT

SECTION 6

LIST OF PERSONS CONTACTED

Marcus Blood, Natural Resources Manager, Hill AFB, 801-777-4618

Kevin Cutler, 75 ABW/JAE, Hill AFB, 801-775-6915

Bruce Evans, 75 ABW/JAE, Hill AFB, 801-777-2847

Boe Hadley, 388th Range Squadron, Hill AFB, 801-777-5072

Sam Johnson, Cultural Resources Manager, Hill AFB, 801-775-5226

Sanford Moss, GIS Coordinator, Hill AFB, 801-775-6972

Clyde Rexroad, 388th Range Squadron, Hill AFB, 801-777-9022

Lt. Col. Jeffery Warnement, 388th Range Squadron, Hill AFB, 801-777-7619

Jaynie Hirschi, Archaeologist, Hill AFB, 801-775-3649

SECTION 7

REFERENCES

- Arkush, Brooke S., 1997. *An Archaeological Assessment of the U.S. Air Force Utah Test and Training Range: The 1996 Field Season*, January 1997.
- Carter, James A., 1998. *A Cultural Resources Inventory for the Proposed Access Road Modifications, Wendover Air Force Range, Tooele County, Utah*, July 1998.
- Carter, James A., 1999. *TS-5 Target Complex Cultural Resource Inventory, Wendover Air Force Range, Tooele County, Utah*, March 1999.
- Cronquist, A., Holmgren, A.H., Holmgren, N.H., Reveal, J.L. & Holmgren, P.K. 1977. *Intermountain flora: vascular plants of the Intermountain West, U.S.A., Volume 6*. Columbia University Press, New York, NY.
- Dames & Moore, and Foster Wheeler Environmental Corporation, 1997. *Final Range Management Plan and Environmental Assessment for the Hill Air Force Range and Wendover Air Force Range of the Utah Test and Training Range*, January 1997.
- EnviroSupport, Inc., ARINC, Digit Lab, 1998. *Draft Range Management Plan and Environmental Assessment for the Utah Test and Training Range*, October 1998.
- EPA, 1974. *Information on Levels of Environmental Noise to Protect Public Health and Welfare with an Adequate Margin of Safety*, EPA Report 550/9-74-004, March, 1974.
- Flint 1971
- Gates and Druer, 1981
- Hill AFB, 2004-2008 *Integrated Cultural Resources Management Plan*
- Hill AFB, 2002 "TS-5 Central Area and Craners Cultural Resources Inventory, Utah Test and Training Range, Tooele and Box Elder Counties, Utah."
- Newman, J.S. and K.R. Beattie, 1985. *Aviation Noise Effects*. Federal Aviation Administration Publication No. FAA-EE-85-2. Washington, D.C.
- Parsons Engineering Science, Inc., 1995. *Final Wetland/Mudflat Management Plan, Utah Test and Training Range, and Little Mountain Testing Facility*, December 1995.
- Radian International, 1993. *Draft Preliminary Assessment/Site Investigation, Wendover Air Force Auxiliary Field, Utah Test and Training Range*, December 1993.
- Radian International, 2000. *Proposed Final EA for Proposed Multiple Targets TS-5, UTTR South Hill AFB, Utah* February, 2000
- Stephen 1974 Suzanne Hecker, Kimm M. Harty, and Gary E. Christenson, 1988, *Shallow Ground Water and Related Hazards in Utah*.
- USAF, 2002. *South Range Activity Report for FY02*, 388 Range Squadron, Hill Air Force Base, Utah.